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TRACK-FOLLOWING SYSTEM FOR THE RECORDING/READING OF A

DATA MEDIUM AND RECORDING MEDIUM

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The invention relates to a track-following system for the recording/reading of a data medium, especially for a multitrack data medium such as a magnetic tape with multitracks placed longitudinally over the tape.

The invention is applicable especially to reading magnetic or optical recordings and, in this context, to the reading of a high-density recording. It is preferably applicable in recording systems such as computing peripherals and all professional systems.

The invention can be extended to recordings on optical tape and on magnetic or optical disk, when it is desired to read several tracks in parallel therefrom.

High-density recording on parallel tracks presents a twofold problem for track following and separation rereading. The small width of the tracks (less than 20  $\mu$ m) means that it is difficult on reading a tape to ensure the accuracy of track following on the basis of the single mechanical guidance at the edge of the tape.

The need to guarantee the interoperability of the tapes and of the readers aggravates this difficulty.

Moreover, obtaining a high signal-to-noise ratio on reading requires rereading the entire track width, which excludes the existence of a barrier between tracks and induces track-to-track reading cross-talk phenomena.

The increase of the longitudinal track density of linear record/read systems makes it necessary to put in place high-performance track-following systems, making it possible to position the read system facing tracks written with a small residual error compared to the

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